



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety Administration**

**July 05, 2019**

East Building, PHH-30  
1200 New Jersey Avenue S.E.  
Washington, D.C. 20590

DOT-SP 7657  
(TWENTY-NINTH REVISION)

**EXPIRATION DATE: 2022-04-30**

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Welker, Inc.  
Sugar Land, TX
2. PURPOSE AND LIMITATIONS:
  - a. This special permit authorizes the manufacture, marking, sale and use of non-DOT specification stainless steel cylinders conforming with all regulations applicable to a DOT specification 3E cylinder, except as specified herein, for the transportation in commerce of the materials authorized by this special permit. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
  - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce.
  - c. This special permit serves as an "Approval" under Part 6, Chapter 5, Paragraph 5.1.1.2 of the International Civil Aviation Organization's Technical Instructions (ICAO TI), and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.
  - d. In accordance with 49 CFR 107.107(a) party status may not be granted to a manufacturing permit. These packaging may be used in accordance with 49 CFR 173.22a.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180 and the ICAO TI.

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4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.201, 173.202, 173.203 and ICAO 4;2.7.2, §§ 173.302a(a)(1), 173.304(a) and ICAO 6;5.1.1.2 in that non-DOT specification cylinders are not authorized, except as specified herein; and §§ 173.301(f)(2) and 177.840(a)(1) in that the pressure relief device on the product side of the cylinder is in contact with liquid product at all times.
5. BASIS: This special permit is based on the application of Welker Inc. dated April 19, 2019, submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

<b>Hazardous Material Description</b>			
<b>Proper Shipping Name</b>	<b>Hazard Class/Division</b>	<b>Identification Number</b>	<b>Packing Group</b>
1,2-Dichloro-1,1,2,2-Tetrafluoroethane or Refrigerant gas R 114	2.2	UN1958	N/A
Air, compressed	2.2	UN1002	N/A
Ammonia Solutions, <i>relative density less than 0.888 and 0.957 at 15 degrees C in water, with more 35 percent but not more than 50 percent ammonia</i>	2.2	UN2073	N/A
Butane see also Petroleum gases, liquefied	2.1	UN1011	N/A
Carbon dioxide	2.2	UN1013	N/A
Compressed gas, flammable, n.o.s. (Crude oil under pressure)	2.1	UN1954	N/A
Compressed gas, toxic, n.o.s. <i>Inhalation Hazard Zone D</i>	2.3	UN1955	N/A
Compressed gas, toxic, flammable, n.o.s. <i>Inhalation Hazard Zone D</i>	2.3	UN1953	N/A

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Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Dichlorodifluoromethane <i>or</i> Refrigerant gas R 12	2.2	UN1028	N/A
Ethane	2.1	UN1035	N/A
Gasoline	3	UN1203	II
Helium, compressed	2.2	UN1046	N/A
Heptanes	3	UN1206	II
Hexane	3	UN1208	II
Hydrocarbon gas mixture, compressed, n.o.s.	2.1	UN1964	N/A
Hydrocarbon gas mixture, liquefied, n.o.s.	2.1	UN1965	N/A
Hydrocarbons, liquid, n.o.s.	3	UN3295	I, II or III
Isobutane <i>see also</i> Petroleum gases, liquefied	2.1	UN1969	N/A
Isopropanol <i>or</i> Isopropyl alcohol	3	UN1219	II
Kerosene	3	UN1223	III
Liquefied gas, toxic, flammable, n.o.s.*	2.3	UN3160	N/A
Liquefied gas, flammable, n.o.s.	2.1	UN3161	N/A
Liquefied gas, n.o.s.	2.2	UN3163	N/A
Methane, compressed <i>or</i> Natural gas, compressed ( <i>with high methane content</i> )	2.1	UN1971	N/A

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Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Nitrogen, compressed	2.2	UN1066	N/A
Oil gas, compressed *	2.3	UN1071	N/A
Pentane	3	UN1265	I, II
Petroleum crude oil	3	UN1267	I, II or III
Petroleum distillates, n.o.s. or Petroleum products, n.o.s.	3	UN1268	I
Petroleum gases, liquefied or Liquefied petroleum gas	2.1	UN1075	N/A
Propane <i>also see</i> Petroleum gases, liquefied	2.1	UN1978	N/A

**NOTES:**

\* Applicable parts of § 173.40 must be complied with when transporting this material.

Other materials must be specifically identified to, and acknowledged in writing, by the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD) prior to the first shipment.

7. SAFETY CONTROL MEASURES:

a. PACKAGING: Packaging prescribed is a stainless steel non-DOT specification cylinder having a marked service pressure of 1800 psi, constructed from seamless stainless steel tubing, with threaded end caps or with flanged flat head end closures at each end restrained by tie rods, and containing a floating piston which forms two pressure chambers. Cylinder must conform with Welker Inc. sketches, photographs, drawings and calculations on file with OHMSPA and with DOT 3E specification (§§ 178.35 and 178.42) except as follows:

**July 05, 2019**§ 178.35(e) *Safety devices.*

(added) Each head must be equipped with safety relief devices.

§ 178.35(f) *Markings.*

Applies except marking "DOT-SP 7657" in lieu of "DOT 3E".

§ 178.35(g) *Inspector's report.*

(added) The inspector's report may be revised to accommodate the tests required by this special permit.

A copy of the inspector's report on the first lot out of each design must be submitted to the OHMSAPD prior to shipment of the cylinders.

§ 178.42(a) *Type, size and service pressure.*

Seamless cylinder conforming with the following:

(1) Model CP-2 piston style receptacle has flat heads on each end restrained with tie rods secured at each end by nuts or with tie rods threaded into an end cap and secured by nuts on the other end; maximum volume must not exceed 1,000 cc.

(2) Model CP-4 piston style receptacle has threaded flat end caps on each end without tie rods; maximum volume is 100 cc.

(3) Dimensions are as follows:

<u>Model Nos.</u>	<u>No. and size of tie rods.</u>	<u>Maximum O.D. x length</u>	<u>Minimum Side wall thickness (inch)</u>
CP-2-50 thru CP-2-1000	6 x 3/8" OD	2.0" x 29"	.105 if threaded, .083 if not threaded.
CP-4-15 thru CP-4-100	none	1.25" x 14"	.074 if threaded, .055 if not threaded.

§ 178.42(b) *Steel.*

All cylinder components must be Type 304 or Type 316 stainless steel.

§ 178.42(f) *Hydrostatic test.*

Hydrostatic test must be as follows:

(1) Each compartment of each piston style receptacle must be subjected to a pneumatic test of at least 500 psi without leakage.

(2) Each cylinder (seamless tube with end caps but without pistons, and with tie bolts, if applicable) must be tested to a hydrostatic test of 3,600 psig and show no defect.

(3) In addition, one cylinder (seamless tube with end caps but without pistons, and with tie bolts, if applicable) out of each lot of 500 cylinders or less must be pressurized to failure. The pressure at which the cylinder fails to hold test pressure must be recorded. This pressure must not be less than 5,000 psi. Rate of pressurization must not exceed 200 psi per second.

(4) The tube body of one cylinder from each lot that has passed the tests prescribed in § 178.42(f)(2) of this special permit, must be flattened to at least 10 times wall thickness without cracking.

§ 178.42(g) *Leakage test.*

Does not apply.

b. TESTING: Each cylinder must be visually reinspected at least once a year for deterioration of seals, scratches, dents and gouges, and must be cleaned as needed with an appropriate solvent recommended by the manufacturer. Components that are deteriorated or damaged shall be replaced by factory specified parts as shown on Welker Inc. drawings and IOM manuals. Components may be replaced by the factory or the user, observing Tie Rod Nut tightening torque values shown in the Welker Inc. IOM manuals. Any additional inspections or retesting requirements should follow the

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guidance of §§ 180.205 and 180.209.

c. OPERATIONAL CONTROLS:

- (1) Each cylinder must be shipped in outside packagings in accordance with § 173.301(a)(9).
- (2) The cylinder may be used for oil-well, natural gas, and liquefied petroleum (LP) gas sampling service and additional materials covered in the table above in paragraph 6 that are being transported for the purposes of analytical testing.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

b. A person who is not a holder of this special permit, but receives a package covered by this special permit, may reoffer it for transportation provided no modifications or changes are made to the package and it is offered for transportation in conformance with this special permit and the HMR.

c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

d. Each packaging manufactured under the authority of this special permit must be marked with a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.

e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.

f. Transportation of Division 2.1 (flammable gases) materials and Division 2.3 (gases which are poisonous by inhalation) materials are not authorized aboard cargo vessel or aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).

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- g. This special permit in no way affects the need to obtain any required authorizations from other agencies of the United States Government or from the competent authorities of countries of origin, transit, and destination.
- h. All internal coatings used for the cylinders shall be compatible with both the hazardous material and the cylinder.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, cargo aircraft only (see restrictions in paragraph 8.f.)
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a current copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, Parts 171-180.
  - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
  - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when the special permit has expired or is otherwise no longer in effect.



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Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)- 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 Immediate notice of certain hazardous materials incidents, and 171.16 Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for William Schoonover  
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at [http://hazmat.dot.gov/sp\\_app/special\\_permits/spec\\_perm\\_index.htm](http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm) Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

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